

## AMENDMENTS TO THE CLAIMS:

Please amend claims 1 and 3-6 and add claims 15-28 as follows. This listing of claims replaces all prior versions and listings of claims in the application.

### LISTING OF CLAIMS:

1. (Currently amended) A ~~closed~~ system for the continuous liquid phase modification and/or conjugation of proteins, purification and concentration thereof which comprises:  
an ultrafiltration/concentration means;  
a reaction vessel being fluidly connected to said ultrafiltration/concentration means;  
a backwash reservoir being fluidly connected with said ultrafiltration/concentration means; and  
a pump being fluidly interconnected between said ultrafiltration/concentration means and said reaction vessel; ,  
wherein ~~the reaction vessel comprises a protein and a reactant for modification and/or conjugation thereof~~ the system is closed.
2. (Cancelled).
3. (Currently amended) The system of claim 1, wherein at least one three-way valve is fluidly and selectively interconnected and situated between said reaction vessel, said ultrafiltration/concentration means and said backwash reservoir.
4. (Currently amended) The system of claim 1, wherein said ultrafiltration means comprises a spiral diafiltration cartridge.
5. (Currently amended) The system of claim 1, wherein the ultrafiltration means is interconnected to a permeate reservoir/receptacle.
6. (Currently amended) The system of claim 1, wherein said reaction vessel is a receptacle of the purified concentrated product from said ultrafiltration/concentration means.
7. – 14. (Cancelled)
15. (New) The system of claim 1, wherein the reaction vessel comprises a protein and a reactant for modification and/or conjugation thereof.
16. (New) The system of claim 1, wherein the system is sterile.
17. (New) The system of claim 1, wherein the system further comprises a series of electronic sensors and valve assemblies connected to a computer to automate the system.
18. (New) The system of claim 1, further comprising a chromatographic device.
19. (New) The system of claim 1, wherein the system is interconnected to a solid state peptide synthesis system.

20. (New) A system for the continuous liquid phase modification and/or conjugation, purification and concentration of proteins, comprising:  
an ultrafiltration apparatus;  
a reaction vessel;  
a flow controlling unit comprising a pump and at least one valve;  
a backwash reservoir fluidly connected to the ultrafiltration apparatus; and  
tubing fluidly interconnecting the ultrafiltration apparatus, the reaction vessel, the flow controlling unit and the backwash reservoir, wherein:

the system is closed and sterile; and  
the tubing is configured to allow:

- a). a reaction solution in the reaction vessel to flow from the reaction vessel to the ultrafiltration apparatus;
- b). a reverse flow from the ultrafiltration apparatus to the reaction vessel; and
- c). a retentate from the ultrafiltration apparatus to return to the reaction vessel.

21. (New) The system of claim 20, wherein at least one three-way valve is fluidly and selectively interconnected and situated between the reaction vessel, the ultrafiltration apparatus and the backwash reservoir.

22. (New) The system of claim 20, wherein the ultrafiltration apparatus comprises a spiral diafiltration cartridge.

23. (New) The system of claim 20, wherein the ultrafiltration apparatus is interconnected to a permeate reservoir/receptacle.

24. (New) The system of claim 20, wherein the flow controlling unit comprises a series of electronic sensors and valve assemblies connected to a computer.

25. (New) The system of claim 20, further comprising a chromatographic device.

26. (New) The system of claim 20, further comprising an affinity and/or gel filtration column.

27. (New) The system of claim 20, further comprising a solid state peptide synthesis system.

28. (New) The system of claim 1, wherein the reaction vessel comprises a protein and a reactant for modification and/or conjugation thereof.